Notebook, N-98-06-30

This notebook covers the period June-July 1898. It was used by Ernest D. Kellogg as a logbook for meter tests. At the end of the book are several pages of undated notes by an unidentified experimenter relating to experiments on the heating of brass tubing. The front cover is labeled "Experimental Integrating Meter Reversing Electrolytic Mr. Kellogg(?) June 30-July 28, 1898." The pages are unnumbered, and the book has been used in both directions. Several pages have been removed from the book. Approximately 40 pages have been used.

Log of Meter Test.
Started at 4.15-A.M. Thursday.
June 30, 1898.

Meter #1.

Start 9 Amp.	Trip.	Tripped Right	Left	Remarks
9.00-30	1.13-00		3.22-30	9 Amp.
1.13-00	4.46-30	3.33-30		
4.46-30	8.20-30		3.34-00	
8.20-30	11-49-30	3.29-00		
11-49-30	3.25-50		9.36-20	
3-25.50	8.26,00	3.00-10		S 1. Rosin contacts
8.26,00	12.18-10		3.52-15	
12.18-15	4.13-30	3.55-15		
4.13-30	7.56-00		3.43-30	
7.56-00	11.21-30	3.25-30	S S	
11.21-30	3.06-10		3.45-40	
3.06-10	6.18-30	3.12-40		agitated cells to remove air bubbles [illegible]
6.18-50				

Put C.P. suspended electrodes in #1 + changed tripping lever. Restart at 9 P.M. July 7

Start	Trip.	Right	Left	Remarks
9.26-18	12.21-30	2.46-30		ten minutes current shut off changing cells.
12.21-30	3.22-45		3.01-15	
3.22-45	6.19	2.54-05		2 min: 10 sec: current shut off changing cells.
6.19	9.10		2.51	
9.10	12.30	3.20		
12.30	3.00		2.30	(over)
3.00	6.03	3.03		Batteries run down

Time ~~6.03~~	Time ~~9.07-30~~	Right	Left ~~3.04-30~~	Remarks
9.07-30	12.20	3.12	[illegible]	Restart.
12.20	3.07	2.47	2.47	
3.07				Batteries run
				down.
8.59	12.02		3.03	Restart.
12.02	3.07-30	3.05-30		
3.07-30				
Run on batteries – Zn carbonate in solution				
5.23-00	A.M. 8.20-00	2.57-00		
8.20-00	11.02-30		2.42-30	
11.02-30	P.M. 1.45-00	2.42-30		
1.45-00	4.42-00		2.57-00	
4.42-00	7.36-00	2.54		
7.36-00	10.26-00		2.50	
10.26-00	A.M. 1.06-00	2.40		
1.06-00	4.02-00		2.56	
4.02-00	6.54-00	2.52		
6.54-00	9.44-00		2.50	
9.44-00	12.30-45	2.46-45		
12.30-45	3.22-00		2.51-45	

3.22-00	6.50-35	3.28-35		
6.50-35	9.25-00		2.34-25	Balance Arm Caught
9.25-00 P.M.	6.11 A.M.	—		
10.17-30	12.41-45		2.24-15	
12.41-45	3.12	2.30 15		
3.12	5.38-00		2.26	
5.38-00	8.05-30	2.27-30		Sent to 1st E.
8.05-30	11.17		2.11-30	
11.17	2.42	3.25		
2.42	6.34-30		3.52-30	
6.34-30				
Silver electrotypes – Cyanide solution				
6.06	6.54	48		
6.54	7.43		49	
7.43	8.33-30	50-30		
8.33-30	9.38		64-30	
9.38	10.36	58		
10.36	11.14		38	
11.14	12.12	58		
12.12	1.05		53	
1.05	2.01	56		
2.01	2.53		52	
2.53	3.43	50		
3.43	4.37		54	
4.37	5.24	47		

(1)

Meter # 2.

		Time Right	Time Left	Remarks
8.27-15	11.34-30		3.07-15	1898 June 30th
11.34-30	3.01-15	3.26-45		"
3.01-15	6.32-25		3.31-10	"
6.32-25	9.46.30	3.14-05		"
9.46.30	12.48-40		3.02-10	"
12-48-40	4.00 about	3:11-20	[illegible]	
4.00.00	7.12.15		3.12 15	
7.12.15	10.30	3 17-45		
10.30	1.55-15		3.25-15	
1.55-15	5.04-45	3.09-30		
5.04.45	8.12-30		3.07-45	
8.12-30	11.51-05	3.38-35		
11.51-05	3.09-20		3.18-15	
3.09-20	6.15-30	3.06-30 ←		agitated cells to prevent bubbles & foam and resulted
6.15-30				

Both suspended & fixed electrodes C.P. zinc.

9.36	12.36-30	2.[illegible]-30	2.50-30	two mins. off changing cells
12.36-30	3.41-15	3.04-45	3.[illegible]	
3.41-15	6.46		3.02-05	2 min. 10 sec. off changing cells
6.46	9.40	2.54		
9.40	12.20-30		2.40-30	(over)
12.20-30	3.30	3.09-30		Batteries [illegible]

9.[illegible]	[illegible].31	44		
11.31			43	
11.[illegible]	[illegible]	62		
12.06	1.03		57.	
1.03	[illegible]	45		
[illegible]	2.39		51	
2.39	3.[illegible]	49		
[illegible]	[illegible]		58	
11.[illegible]	[illegible]	53		
5.[illegible]	[illegible]		66	
	[illegible]	52		
[illegible]	11.41		71	
12.45	1.[illegible]3	58		
1.[illegible]3	3.55		72	Sent to [illegible]
3.55				

Time	Trip	Right	Left	Remarks
7.19	10.35	3.16	3.[illegible]	
10.35	1.50	3.15	3.15	
1.50	5.10-30	3.20-30	3.20-30	
5.10.30				Battery down
8.37-30	11.51		3.13-30	
11.51	3.13	3.18		
3.13				

Cd. sulphate - Cd electrodes.

5.10-00	9.25-00 A.M.	4.15-00		
9.25-00	11.04-30		1.39-30	
11.04-30	12.45-30 P.M.	1.41-20		
12.45-30	2.25-00		1.39-10	
2.25-00	4.19-40	1.54-40		
4.19-40	6.30-00		2.10-20	
1.30-00	7.56-00	1.26-00		
7.56-00	10.02-00		2.06-00	Electrode bent
10.02-00	7.25-30	3.23-30		& touching bottom
7.25-30	9.46-30		2.21-00	
9.46-30	11.40-45	1.54-15		
11.40-45	1.17-20		1.36-35	
1.17-20	4.38-30	3.21-10		
4.38-30	6.05-00		1.26-30	

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9.11-30	10-03	51-30		Sent to T.A.E.
10.03	10.58		55	
10.58	11.53	55		
11.53	12.46		53	
12.46	1.38	52		
1.38	2.31		53	
2.31	3.26	55		
3.26	4.21		55	
4.21	5.15	54		Cars beginning
5.15	6.06-30		51-30	to run
6.06-30	7.00-30	54-30		
7.00-30	[illegible]		[illegible]	[illegible]
[illegible]	9.28-10	33 [illegible]		caught
9.28-10	10.25		56-50	
10.25	11.06-15	41-15		
11.06-15	11.53		46-45	
11.53	12.36	43		
12.36	2.05		89	Balance was
2.05	2.58	53		caught,
2.58	3.45-30		47-30	
3.45-30	4.35	49-30		
4.35	5.17		42	
5.17	5.56	39		
5.56	6.36		40	
6.36	7.23	47		
7.23	8.08		45	
8.08	8.57	49		
8.57	9.47		50	

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6.05-00	7.38-00	1.33-00		
7.38-00				

Silver Electrodes – Cyanides of K + Ag.

10.11-30 P.M.	11.02-30	51.		
11.02-30	11.54-00		51-30	
11.54-00	12.43-00	49		
12.43-00 A.M.	1.28-00		45	
1.28-00	2.21	53		
2.21	3.12		51	
3.12	3.58	46		
3.58	5.45			Balance arm caught
5.45	6.27	42		
6.27	7.20		53	
7.20	8.15-30	55-30		
8.15-30	9.10		54-30	
9.10	10.04	54		
10.04	10.57		53	
10.57	11.55	58		
11.55	12.45		50	
12.45 P.M.	1.31	46		
1.31	2.26		55	
2.26	3.15	49		
3.15	4.10		55	
4.10	4.56	46		
4.56	5.46		50	
5.46	6.39	53		
6.39	7.30		51	
7.30	8.22-30	52-30		
8.22-30	9.11-30		49	

11.30	12.31		61	
12.31	1.15	44		
1.15	2.15		60	
2.15	2.58	43		
2.58	3.56		58	
3.56	4.39	43		
4.39	5.36		57	Put [illegible]
5.36				

Tester # 3 (1)

Start	Finish	Fail Right	Fail Left	Remarks
12.13-15	3.30-30		3.17-15	
3.30-30	7.40-40	4.10-10		
7.40-40	10.59.45		3.19-05	
10-59-45	3-50-20	4-50-35		[illegible] not satisfied.
3.50-20	7.43.45		3.53-25	
7.43.45	1.37-15	5.53-30		
1.37-15	5.59-30		4.22-15	
5.59-30	11.35-40	5.36-00		
11.35-40	3.11-30		3.35-50	
3.11-30	7.06-30	4.55-00 ←		Tapped cell to [illegible]
7.06-30				

Copper (suspended) electrodes plated with zinc

Start	Finish	Fail Right	Fail Left	Remarks
2.13-30	6.47	4.31-20		2 min. 10 sec. off changing cells.
6.47	9.45-30		3.58-30	
9.45-30	2.59	5.13-30		
2.59	6.20		3.21	
6.20	12.04-30	5.44-30		
12.04-30				Battery down.
10.37	2.42-30		4.05-30	Restart.
2.42-30				Battery down.

(over)

7.2	7.51		39
7.5	8.43-30	52-30	
	Restart		
11.32	12.39	67	
12.39	1.23		44
1.23	2.11	51	
2.11	2.48-30		34-30
2.48-30	3.45	56-30	
3.45	4.25		40
4.25	5.20	55	
5.20	5.58-30		38-30
5.58-30	6.53	50-30	
6.53	7.35		42
7.35	8.33-30	58-30	
8.33-30	9.15		41-30
9.15	10.12	57	
10.12	10.52		40
10.52	11.50-30	58-30	
11.50-30	12.35		44-30
12.35	1.30	55	
1.30	2.28		58
2.28	3.31	63	
3.31	4.26		55
4.26	5.24	58	
	Return.		
9.4[illegible]-30	10.45		63.30
10.45	11.30	45	

Regulation of [illegible] [illegible] [illegible]

Ag electrodes - KCN + AgCN solution. # 3.

Time	Trip	Right	Left	Remarks
4.00-00	5.40-00 A.M.		1.40-00	(2)
5.40-00	7.12-20	1.32-20		
7.12-20	8.54-20		1.42-00	
8.54-20	9.51-45	0.57-25		
9.51-45	10-31-30		39.45	
10.31-30	11.27-40	56.10		
11.27-40	12.10-30 P.M.		42.50	
12.10-30	1.10-00	59-30		
1.10-00	1.54-20		44.20	
1.54-20	2.52-10	57-50		
2.52-10	3.35-30		43.20	
3.35-30	4.36-15	60-45		
4.36-15	5.17-50		41.35	
5.17-50	6-12-30	54-40		
6.12-30	6.53-00		40.30	
6.53-00	7.46-00	53-00		
7.46-00	8.25-00		39-00	
8.25-00	9.21-00	56-00		
9.21-00	10.02-00		41-00	
10.02-00	10.57-00	55-00		
10.57-00	11.41-00		43-00	
11.41-00	12.43-00 A.M.	58-00		
12.43-00 A.M.	1.32-00		51.00	
1.32-00	2.36-00	64-00		
2.36-00	3.34-00		58-00	
3.34-00	4.28-00	54-00		
4.28-00	5.24-00		56-00	
5.24-00	6.07-00	43-00		
6.07-00	6.52-00		45-00	(over)

9.05	9.50	46		(4)
9.51	10.30		39	
10.30	11.22-30	52-30		
11.22-30	12.01		38-30	
12.01	12.56	55		
12.56	1.36		40	
1.36	2.26	50		
2.26	3.08		42	
3.08	3.51	43		
3.51	4.29		38	
4.29	5.20	51		
5.20	6.00		40	
6.00	6.47-30	47.30		
6.47-30	7.25-10		37-40	
7.25-10	8.18-30	53-20		
8.18-30	8.57		38-30	
8.57	9.47-30	50-30		
9.47-30	10.26		38-30	Sent to 9a.c.
10.26	11.10	44		
11.10	11.57		47	
11.57	12.48	51		
12.48	1.27		39	
1.27	2.21	54		
2.21	3.03		42	
3.03	3.55	52		
3.55	4.45		50	
4.45	5.39	54		
5.39	6.20-30		41-30	
6.20-30	7.12	52-30		

6.52-00	7.50-00	58-00		(3)
7.50-00	8.27-30		37-30	
8.27-30	9.20-30	57.00		
9.20-30	10.04-00		43.30	
10.04-00	10.59-00	55-00		
10.59-00	11.39-45		40-45	
11.39-45	12.37-00	57.15		
12.37-00	1.18-20		41-20	
1.18-20	2.17-00	58-40		
2.17-00	2.58-30		41-30	
2.58-30	3.52	55-30		
3.52	4.32-30		40-30	
4.32-30	5.27-35	55-05		
5.27-35	6.05-00		37-25	
6.05	6.54	49		
6.54	7.34-20		40-20	
7.34-20	8.33	58-40		
8.33	9.16-10		43-10	
9.16-10	10.10	53-50		
10.10	10.50-45		40-45	
10.50-45	11.47	56.15		
11.47	12.32		45	
12.32	1.28	56		
1.28	2.21		53	
2.21	3.17	56		
3.17	4.05		48	
4.05	5.01	56		
5.01	5.45		44	
5.45	6.39-10	54-10		
6.39-10	7.20		40-30	
7.20	8.14-30	54-30		
8.14-30	9.05		50-30	

#4

				Remarks
5.10				
8.06	11-14		3.08	
11-14	2-27-20	3.13 20		
2-27-20	5-05.10		3.27-30	
5.05.10	8.48.45	2.53-35		
8.48 45	12.15-00		3.26-15	
12.15	3.-35-00	3.20-00		
3.35-00	7.16-40		3.41-40	
7.16-40	11.01-30	3.44-50		
11.01-30	2.27-30		3.26-00	
2.27-30	7.13-45	4.46-15		
7.13-45				
Changed only in rivers & liver.				
9.46	12.50	2.54		(10 minutes off changing cells.)
12.50	6.12		5.19-20	2 mins. 10 sec. off changing cells
6.12	8.59-25	2.47 25		
8.59-25	2.21		5.21-35	
2.21	6.25	4.04		
6.25	12.14-30		4.49 30	Battery down

11.30-30	11.25-15	58-15		
11.25.15	12.27		58-15	
12.27	1.25	58		
1.23	2.25		60	
2.25	3.25	60		
3.25	4.23		58	
4.23	5.17.30	54-30		[illegible]

Silver electrodes – Nitrate solution.

11.35	12.52-30	1.17-30		
12.52-30	2.17		1.25-30	
2.17	3.20	1.03		
3.20	4.40		1.20	
4.40	6.21-30	1.21.30		
6.21-30	7.08		46-30	
7.08	9.25	1.17		
Restart.			Suspending unit broke. Sent to T.A.E,	
12.02	1.01-30	59-30		
1.01-30	2.05		63-30	
2.05	3.12	67		
3.12	4.10		58	
4.10	5.04	56		
5.04	6.03		59	
6.03	6.59	66		
6.59	7.50		51	
7.50	8.51	59		
8.57	9.51		60	
9.51	10.52	61		
10.52	11.52		60	
11.52	12.51-30	59-30		
12.51-30	1.55		63-30	
1.55	2.58	63		
2.58	3.59		61	
3.59	5.00	61		
5.00	6.01		61	

3

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Meter # 6

Start	Trip	Time		Remarks
10.55-45	2.30-15	[illegible]	[illegible]	
2.30-15	6.12-30	3.42-15	3-34-30	
6.12-30	9.55-45		3.43-15	
9-55-45	1-44-50	3.49-05		
1-44-50	5.33.30		3.48-40	
5.33.30	9.24.30	3.51-00		
9.24-30	1.28-00		4.03-30	55
1.28-00	5.27-15	3.59-15		
5.27-15	9.11-20		4.44-05	69
9.11-20	1.08-15	3.56-55		
1.08-15	4.48.20		3.40-05	
4.48-20	8.39-30	3.51-10		
8.39-30				
Only [illegible] lines changed,				
9.10-35	12.50-00	3.29-25		two minutes off changing cells
12.50-00	4.53-30		4.03-30	
4.53-30	10.04-30	5.11-20		
10.04-30	2.20		4.15-20	
8.07.15	12.18.15		4.11	Batt. down
12.18-15	5.48	5.29-41		
				Batt. down

Time	Trip.	Right	Left	Remarks.
8.59	2.40	4.50		
2.06-30	8.45-30		4.39	
8.45-30	12.36	3.50-30		
12.36	3.59		3.03	

2.55	3.16		5-1	
3.16	[illegible]	4.41		
4.[illegible]	11.17		47	[illegible]
4.47	[illegible].31	11.11		

Battery #6.

[illegible]	[illegible]	[illegible]		
[illegible]-00	8.54-00	Right	Left	
8.5[illegible]-00	12.21-00	3-22-00	3.22 00	
12.21-00	3.49-30	3-28-30	3	
3.[illegible]-30	7.15-10		3.25-40	
7.10	10.40	3.24-50		
10.40-	2-23-15		3.43-15	
2.2[illegible]	5-34,10	3 .10-55		
5.34,10	8.57-30		3 .23-20	
8.57-30	12.41-15	3.43-45		
12.41-15	4.27-15		3.46-00	
4.27-15	7.37-30	3.10-15		
7.37-30	11.25-45		3.48-15	
11.25-45	3.07-10	3.41-25		
3.07-10	6.14-10		3.07-00	agitated cells [illegible]
6.14-10				
9.46	12.16-05	2.20-05		ten min. off changing cells.
12.16-05	3.26-30		3.10-25	
3.26-30	6.28	2.59 2.00		
6.28	9.29		3.01	
9.29	12.19	2.50		

only reversing [illegible] changed.

6.26-30	12.02	5.35-30		
12.02.	3.12		3.10	
3.12	6.21-30	3.09-30		
6.21-30	12.31		6.09-30	
12.31	3.45	3.14		
3.45	7.27-30		3.42-30	
7.27-30	11.15	3.47-30		
11.15	3.17		4.02	
3.17	7.38	4.21		
[illegible]				
5.08-30	5.50-30	C	42	
5.50-30	6.36	40-30		
6.36	7.23		47	
7.23	8.08	45		
8.08	8.49		41	
8.49	9.34	45		
9.34	10.18		44	
10.18	11.02	44		
11.02	11.48		46	
11.48	12.36	48		
12.36	1.22		46	
1.22	2.03	41		
2.03	2.55		52	
2.55	3.41	45		
3.41	4.26		45	
4.26	5.12	46		
5.12	5.58		46	
10.25	11.13-30	48-30		
11.13-30	12-00		46-30	
12-00	12-45	45		
12.45	1.40		55	
1.40	2.25	45		

		Right	Left	Remarks.
12.19	3.28		3.09	
3.28	6.23	2.55	3.	
6.23	9.25-30		3.02-30	
9.25-30	12.28	3.02-30		
12.28	3.45		3.17	Batt. down.
6.18-30	10.01	3.42-30		Restart.
10.01	1.21-30		3.20 30	
1.21-30	4.50-30	3.29-00		
Electrolytic Zinc - 10% ZnSO4 solution.				
P.M. 1.35-45	4.19-40	2.43-55		
4.19-40	6.53-00		2.33-20	
6.53-00	9.39-00	2.44		
9.39-00	12.33-00		2.56	
12.33-00 A.M.	3.47-00	3.14		
3.47-00	7.00-00		3.13	
7.00-00	9.08-30	2.58-30		
9.08-30	12.38-45 P.M.		2.40-15	
12.38-45	2.29-30	1.30-45		Sent to G.A.E.
2.29-30	6.14		3.44-30	
6.14	9.06-45	2.52-45		
9.06-45	6.26-30		9.19-45	

Meter #7.

Ag electrodes – Cyanide solution –

Time	Trip	Right	Left	Remarks
5.25	6.12-30	47.30		July 19
6.12-30	7.04		51.30	
7.04	7.52	48		
7.52				
Agate knife edges – ~~lead leads~~. KCl-Ag K(Cy) [illegible]				
12.02-30	2.55		2.43-30	
2.56	5.48	2.52		
5.48	8.35-30		2.47-30	
8.35-30	11.46	2-10-30		
11.46	2.50		3.0[illegible]	
2.50	5.53	3.03		
5.53	8.50-45		2.57-45	
8.50-45	8.29	3 38-15		
11.45	2.21	Mercury	2.36	
2.21	5.36	3. 15		
5.36	8.55		3.19	
8.55	12.30	3. ~~3~~ 5		
12.30	4.30		4.20	
4.30	9.31	4. 41		
9.31	4.13		7.42	
4.13				

Tintes #2 Ag electrodes-Cyanide solutions

Time	Trip.	Right	Left	Remarks.
7.16	8.18	62		July 18.
8.18	9.22.		64	
9.22	10.27	65		
10.27	11.28		61	
11.28	12.31	63		July 19.
12.31	1.41		60	
1.41	2.47	66		
2.47	3.48		61	
3.48	4.56	68		
4.56	5.57		61	
5.57	6.56	59		
6.56	8.00-30		64 -30	
8.00-30	9.02-30	62		
9.02-30	10.01-30		59	
10.01-30	11.09	67-30		
11.09	12.18		69	
12.18	1.26	68		
1.26	2.32		66	
2.32	3.41	69		
3.41				
Ag KCy2 sol.—again tripping time.				
10.52	1.45		2.48	July 26
1.42	4.23	2.41		
4.23	7.05		2.42	July 27
7.05	10.11	3.06		
10.11	4.16			Transmission
4.16	7.19-30		3.03-30	by Mech
7.19-30	10.14-30	2.55		
10.14-30	12.02-15		2.37-45	
12.02-15	3.30	2.37-45	~~3.7-45~~	Sent to TAE
3.30	6.07		2.37	
6.07	9.12.	3.05		
9.12	12.21		3.09	July 28
12.21	3.33	3.12		
3.33	6.43-30		3.10-30	
6.43-30	9.22	2.37-30		
9.22	12.00		2.38	
12.00	2.44	2.44		Sent to TAE

[illegible]

2.44
5.25
8.03
10.46
1.17-30
4.12
6.47-30
9.12
11.35-30
2.05
4.45
7.29
10.12
1.15
5.02
7.58
1.0.47
1.45
5.19
9.18
1.46

5.25
8.03
11.46
1.17-30
4.12
6.47-30
9.12
11.35-30
2.05
4.45
7.29
10.12
1.15
5.02
7.58
10.47
1.45
5.19
9.18
1.46

2.38
2.31-30
2.35-30
2.23 30
2.40
2.43
3.47
2.49
3.34
4.28

2.41
2.43
2.34-30
2.24-30
2.29-30
2.44
3.03
2.56
2.58
3.59

July 27
Sent to T.A.L.

Meter #3

Ag electrodes - Cyanide sol.

Time	Trip	Right	Left	Remarks
6.17	7.16	59		July 18.
7.16	8.01-30		45-30	
8.01-30	8.56	54-30		
8.56	9.44		48	
9.44	10.38	54		
10.38	11.18		40	July 19
11.18	12.15	57		
12.15	1.13		58	
1.13	2.16	63		
2.16	3.10		56	
3.10	4.06	56		
4.06	4.54		48	
4.54	5.54	60		
5.54	6.34		40	
6.34	7.32-30	58-30		
7.32-30	8.14-15		41-45	
8.14-15	9.09	54-45		
9.09	9.48		39	
9.48	10.43	55		
10.43	11.26		43	
11.26	12.23	57		
12.23	1.00		37	
1.00	2.02	62		
2.02	2.45		43	
2.45	3.45	60		
3.45	4.30		45	
4.30	5.22	52		Sent to T.C.
5.22	~~7.05~~ 6.03		~~58~~ 41	
~~7.05~~ 6.03	~~8.04~~ 7.01	58		
~~8.14~~ 7.01	~~9.02~~ 7.46	~~47~~	45	
11.55	12.48		53	July 20
12.48	2.01	73		
2.01	3.34		93	
3.34	5.10	96		
5.10	6.17		67	
K_2CO_3 - $AgK(Cy)_2$ - agate tripping pin.				July 23
11.54	1.02	1.08		A.M.
1.02	4.02			Trip missed
4.02	5.44		1.42	by Nick.

3 K_2CO_3 - Ag K(Cy)$_2$

Time	Trip	Right	Left	Remarks
5.44	7.15	2.31		
7.15	9.40		2.25	
9.40	11.15	1.35		
11.15	12.12		0.57	P.M.
12.12	1.47	1.25		
1.47	2.44		0.57	
2.44	4.21	1.27		
4.21	5.22-30		1.01-30	
5.22-30	7.02-30	1.40		
7.02-30	8.14-30		1.12	
8.14-30	10.00	1.45-30		
10.00	11.25		1.25	
11.25	12.58-30	1.33-30		
12.58-30	2.07		1.08-30	
2.07	3.56	1.49		
3.56	5.10		1.14	
[illegible]	11.12	1.12-30		July 25
11.12	1.08		1.26	
1.08	2.12	1.04		
2.12	3.34		1.22	
3.34	4.30	.56		
4.30	6.51		2.21	
6.51	8.14-30	1.23-30		
8.14-30	9.13		.58-30	
9.13	10.36-30	1.23-30		
10.36-30	11.34		.57-30	
11.34	12.57	1.23		
12.57	1.56		.59	July 26
1.56	3.16	1.20		
3.16	4.25		1.09	
4.25	5.35	1.10		
5.35	6.29		.54	
6.29	7.50	1.21		
7.50	8.44-30		.54-30	
8.44-30	10.05	1.20-30		
10.05	11.20		1.15	
11.20	12.51	1.31		
12.51	1.47		.56	
1.47	3.16	1.29		

3. K_2CO_3 - Ag K(Cy$_2$)

3.10	5.00		2.24	
5.00	6.48	1.08		
6.48	8.26		1.38	
8.26	9.33	1.19		
9.33	11.06		1.31	
11.06	12.11	1.05		
12.11	1.44-30		1.33-30	July 27
1.44-30	2.50	1.05-30		
2.50	4.27		1.37	
4.27	5.34	1.07		
5.34	7.13		1.39	
7.13	8.22	1.09		
8.22	9.47		1.25	
9.47	10.48-30	.57-30		
10.48-30	12.01-15		1.12-15	
12.01-15	1.03	.58-15		
1.03	2.24		1.21	
2.24	3.21	.57		
3.21	4.41-30		[illegible]-30	
4.41-30	5.38-30	.57		
5.38-30	7.08		1.29	
7.08	8.15	1.07		
8.15	9.48		1.33	
9.48	10.54	1.06		
10.54	12.28-30		1.34-30	
12.28-30	1.37-30	1.09		July 28
1.37-30	3.12		1.34-30	
3.12	4.22	1.10		
4.22	5.57		1.35	
5.57				Electrodes cut [illegible]

Meter # 4 Ag electrodes - Cyanide sol.

Time	Trip	Right	Left	Remarks
6.17	7.20		63	July 18.
7.20	8.21	61		
8.21	9.22		61	
9.22	10.27	65		
10.27	11.31		64	
11.31	12.31	60		July 19.
12.31	1.39		68	
1.39	2.42	63		
2.42	3.40		58	
3.40	4.43	63		
4.43	5.47		64	
5.47	6.47	60		
6.47	7.43-30		56-30	
7.43-30	8.39	55-30		
8.39	9.35		56	
9.35	10.30	55		
10.30	11.26		56	
11.26	12.19	53		
12.19	1.13		54	
1.13	2.10	57		
2.10	3.07		57	
3.07	4.02	55		Sent to T.A.E.
4.02	4.58		56	
4.58	6.00	62		
6.00	7.01		61	
7.01	7.59	58		Batt. down
12.04	1.12		68	July 20
1.12	2.22	70.		
2.22	3.33		71	
3.33	4.43	70		
4.43	5.55		72	
~~Pt +~~ AgCl + Key – agat tripping Jars.				
12.27	2.39	2.12		
2.39	4.34		.1.55	July 22. A.M.
8.45	10.34	1.49		
10.34	12.13		1.39	P.M.
12.13	1.57	1.44		
1.57	3.35		1.38	
3.35	5.11	1.36		

#4 KCl - Ag K(Cy)$_2$

Time	Trip	Right	Left	Remarks
5.11	7.03		1.52	
7.03	8.53	1.50		
8.53	10.48-30		1.55-30	
10.48-30	12.43	1.54 30		
12.43	2.41		1.58	
2.41	4.50	2.09		
10.21-30	[illegible]		2.04-30	
12.[illegible]	1.[illegible]	1.48		
1.[illegible]	3.31		1.40	
3.31	[illegible]	1.49		
6.[illegible]	6.57		1.34	
6.57	[illegible]	1.44		
8.[illegible]	10.24		1.43	
10.24	12.20-30	1.42 30		July 26
12.20-30	1.50		1.48-30	
1.50	3.55	1.45		
3.55	[illegible]		1.41	
[illegible]	8.34	1.49		
8.34	10.15		1.41	
10.15	11.57	1.42		
11.57	1.50		1.53	
1.50	3.20	1.30		
3.20	5.02		1.42	
5.02	5.40	.38		
5.40	6.48		1.08	
6.48	8.45	1.57		
8.45	10.39		1.54	
10.39	12.39	2.00		July 27
12.39	2.40		2.01	
2.40	4.42	2.02		
4.42	6.43		2.0[illegible]	
6.43	8.44	2.07		
8.44	10.27		1.43	
10.27	12.14	1.47		
12.14	1.57		1.43	
1.57	3.45	1.48		
3.45	5.17-30		1.32-30	
5.17-30	7.04	1.46-30		
7.04	8.58		1.54	
8.58	10.28	1.57		
10.28	12.28		1.33	July 28
12.28	2.18	1.50		
2.18	4.03		1.45	
4.03	6.03	2.00		
6.03	7.43		1.40	
7.43	9.35	1.52		
9.35	11.25		1.50	
11.25	1.17-30	1.52-30		
1.17-30	3.08-30		1.51	
3.08-30	4.58	1.49-30		[illegible]
4.58	6.[illegible]		1.50	
6.[illegible]	8.33-30	1.45-30		
8.33-30	10.14-30		1.41	
10.14-30	11.58	1.43-30		
11.58	1.[illegible]		1.[illegible]	July 29
1.[illegible]	3.[illegible]	1.[illegible]		
3.2[illegible]	5.[illegible]		1.57	
5.[illegible]	7.18	1.55		
7.18	9.02		1.44	
9.02	10.50	1.48		T.G.C. [illegible]
10.50	12.25		1.35	
12.25	2.00	1.35		
2.00	3.36		1.36	
3.36	6.51			Tripping long?
6.51	8.28	1.37		
8.28	10.06		1.38	
10.06	11.49	1.43		
11.49	1.43		1.54	
1.43	3.40	1.57		
3.40	5.35		1.55	
5.35				

Meter # 5 Ag electrodes - HCl solution

Time	Time	Right	Left	Remarks
7.06	10.40		3-34	July 18.
10.40	2.11	3.31		July 19
2.11	5.16		3.05	
5.16	10.21	5.05		
10.21	3.41		5.20	
3.41				
Ag electrodes - Cu SO4 solution				July 27
10.26 a.m.	6.22 a.m.	7.56		July 28
6.22	12.47		6.25	
12.47	7.35	7.09		[illegible]
7.04	2.35		7.31	July 28
2.35	9.27-30	6.52-30		
9.27-30	3.15		5.48-30	[illegible]
3.15	8.53	5.38		
8.53	2.48		5.55	
2.48	6.12	6.24		
6.12	2.47-30		5.35-30	
2.47-30	8.25	5.37-30		
8.25	2.33		6.08	
2.33	8.58	6.25		
8.58	2.28		5.30	
2.28	3.04			

Meter #6

Gey electrodes - Cosmid solution

Time	Trip.	Right	Left	Remarks
6.15	7.06		51	July 18.
7.06	7.51	45		
7.51	8.37-30		45.30	
8.37-30	9.24	46-30		
9.24	10.08		44	
10.08	10.56	48		
10.56	11.42		46	
11.42	12.32	50		July 19.
12.32	1.22		50	
1.22	2.11	49		
2.11	2.58		47	
2.58	3.44	46		
3.44	4.19		35	
4.19	5.16	57		
5.16	5.57		41	
5.57	6.40	43		
6.40	7.23		43	
7.23	8.10	47		
8.10	8.49		39	
8.49	9.35	46		
9.35	10.15		40	
10.15	11.00	45		
11.00	11.45		45	
11.45	12.32	47		
12.32	1.12		40	
1.12	1.57	45		
1.57	2.37		40	
2.37	3.19	42		
3.19	4.01		42	
4.01	4.46	40		Sent to T.G.E
4.46	5.30		44	
5.30	6.17	47		
6.17	7.46			
7.46	8.34		48	Batt. down
12.23	1.12	~~4~~9		
1.12	2.01		49	
2.01	2.56	55		
2.56	3.38		42	
3.38	4.27	49		
4.27	5.18		57	

7 2/23/4

5.18 - 6.66 - .52

#6 $K_2CO_3 - AgK(Cy)_2$

Time	Trip	Right	Left	Remarks
4.58	6.46	1.48		July 23 P.M.
6.46	8.35		1.49	
8.35	10.28	1.53		
10.28	12.18		1.50	
12.18	2.07	1.49		
2.07	4.03-30		1.56-30	
4.03-30	5.58	1.54 30		
11.50	1.16	1.26		
1.16	2.51		1.35	
2.51	4.11	1.26		
4.11	5.39		1.20	
5.39	7.11	1.32		
7.11	8.38-30		1.27-30	
8.38-30	10.16	1.27-30		
10.16	11.29		1.23	
11.29	12.54	1.25		
[illegible]	[illegible]		1.21	
[illegible]	3.36	1.23		
3.36	4.58		1.20	
4.58	5.30	.32		
5.30	7.38		2.08	
7.38	9.25-30	1.27-30		
9.25-30	[illegible]		1.20	
[illegible]	11.46	1.21		
11.46	1.05		1.19	
1.05	2.30	1.25		
2.30	3.46		1.16	
3.46	5.06	1.20		
5.06	6.29		1.23	
6.29	8.05	1.36		
8.05	9.38		1.33	
9.38	11.14	1.36		
11.14	12.46		1.32	
12.46	2.21	1.35		
2.21	3.54		1.33	
3.54	5.36	1.32		
5.36	7.00		1.34	
7.00	8.35	1.35		
8.35	9.58		1.23	
9.58	11.13	1.15		
11.13	12.37		1.24	
12.37	1.57	1.20		
1.57	3.17		1.20	
3.17	4.37	1.20		Sent to T.A.C.
4.37	5.55		1.18	
5.55	7.23	1.28		
7.23	8.54		1.31	
8.54	10.21	1.27		
10.21	11.54		1.33	
11.54	1.23-30	1.29-30		
1.23-30	2.58		1.34-30	
2.58	4.31	1.33		
4.31	6.04		1.33	
6.04	7.30	1.26		
7.30	8.56	1.	1.26	
8.56	[illegible]	1.20		
[illegible]				Timed by [illegible]
[illegible]	[illegible]		1.21	
2.16	3.37-30	1.21-30		
3.37-30	4.56-30		1.19	Sent to T.A.C.
4.56-30	6.14	1.17-30		
6.14	7.32		1.18	
7.32	8.49-30	1.17-30		
8.49-30	10.06-30		1.17	
10.06-30	11.24-30	1.18		
11.24-30	12.41		1.17 30	July 29
12.41	2.01	1.21		
2.01	3.18		1.16	
3.18	4.35	1.17		
4.35	6.02		1.27	
6.02	7.09	1.07		
7.09	8.24		1.15	
8.24	9.43	1.19		
9.43	11.02-30		1.19-30	
11.02-30	12.22	1.19-30		
12.22	1.45		1.23	
1.45	2.56-30	1.11 30		
2.56-30	4.12-30		1.16	
4.12-30				

No 9

in iron tube half full of
oleic acid ran to 600 degr
took out thermometer and ran 1/2
hour longer No leak

No 10

222	214
229	223
231	228
239	183
236	234
231	220
1388	1302

1302
1388
·12) 2690 (224
24
29
24
50

No 5

in old iron tube half full linseed oil ran to 600 deg's and leaked could not find any of the bamboo fibres nor any sugar or gelatine

---

No 6

in iron tube half full of Castor oil ran to 600 and then leaked

---

No 7

in iron tube filled with powder carnauba wax ran to 600 deg's and took out thermometer and ran 25 minutes longer and then it leaked

---

No 8

in iron tube filled half full of stearic acid ran to 600 deg's and took out thermometer and ran half hour longer and no leak

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```
 250      197
 270      199
 354      233
 336      262
 295      215
----     ----
1505     1106
         1505
        -----
      10)2611(261
         20
         --
          61
          60
          --
           1
             261
```

No 1

Brass tube 3/32" wall half full Parafine ran to 550 Deg of heat and seam in tube opened

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No 2

Brass tube 3/32" wall half full of Castor oil ran to 600 deg's of heat tube bursted seam

---

No 3

Brass tube 3/32" wall half, full of Boiled linseed oil ran to 575 Deg's seam burst

---

No 4

with old iron tube filled half full of parafine ran to 600 deg's and took out thermometer and ran 15 minutes longer and then it leaked

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206
194
191
197
189
218
186
7 | 1381
197.2
194.6
2 | 391.8
195.9

187
211 10
142
192
205
187
198 3
7 | 1362
194.6

195.9
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